

REMARKS/ARGUMENTS

In the Office Action mailed on December 16, 2008, the Examiner rejected Claims 26, 36 and 37 of this application under 35 U.S.C. 112, second paragraph, as indefinite. Applicant amended claims to clarify the subject matter of claim 26 and to change the dependency of claim 36 as suggested by the examiner.

Examiner rejected claims 24, 25, 27, 30-35, and 45 under 37 C.F.R. 102(b) as anticipated by Otsuki et al. (JP 8-322449), and claims 24-27, 30, 40, 41, and 45 under 37 C.F.R. 102(b) as anticipated by Binker et al. (DE 19950634).

Examiner rejected claims 24-37, and 40-45 under 37 C.F.R. 103(a) as unpatentable over various combinations of prior art references.

Applicant amended independent claims 24, 25 and 45 to clarify the subject matter of the invention and to emphasize that the fumigation system of the present application uses toxic fumigants and is directed to preventing the release of the toxic fumigants in the atmosphere. This amendments are supported by the original specification, for example, on page 6, line 25-36, page 9, lines 1-24, etc.

Applicant appreciates the time and consideration provided by the Examiner in reviewing this application, however, respectfully traverses the rejection at least for the following reasons:

Rejection under 37 C.F.R. 102(b):

Claim 24 of the present application is directed to a mobile fumigation system located within at least one ISO general purpose shipping container, wherein at least a part of the space within the container is adapted for a fumigation chamber. The fumigation chamber is separated by a gas-tight partition wall from a compartment containing a fumigation apparatus. The fumigation apparatus comprises a fumigant inlet device to allow a flow of a toxic fumigant (such as for example methyl bromide), into the fumigation chamber; an extraction device arranged to remove a majority of the toxic fumigant from the fumigation chamber; and an absorption device to absorb the toxic fumigant extracted from the fumigation chamber to prevent it's release in the atmosphere. The fumigation apparatus is operatively connected with a fumigation chamber through the partition wall.

1. Rejection over Otsuki et al. (JP 8-322449)

Otsuki describes a van-type container (as oppose to ISO general purpose shipping container of present application.) The container in Otsuki is partitioned to create a gas control chamber (9) and a product housing chamber, or an agricultural produce storage room (10). The product housing chamber (10) is arranged to be airtight using a sealing membrane (4). Inside the gas control chamber (9) there is equipment for circulating CO₂ gas through a flow channel (13) so as to feed the CO₂ to the product housing chamber (10). The Otsuki patent is directed to killing insects by the insecticidal action of CO₂ without using toxic fumigants. (See paragraph 12 of JP'449) Otsuki does not suggest a fumigation chamber or an absorbing device for removing a harmful fumigant from the fumigation chamber, since no fumigant is being used. Instead, JP'449 features an ethylene removal device (35) that is arranged so as to remove or absorb ethylene released from agricultural produce in order to increase preservation of the produce.

It is well known that agricultural produce (especially fruit) expires ethylene. This can build up in a container over time and cause rapid/excessive ripening. All Otsuki teaches is the well known art of circulating CO₂ gas, but with the extra step of picking up this expired *ethylene* to prevent its build up in the container. Ethylene is not a fumigant; it is actually a natural ripening agent, produced by fruit as it ripens. The ethylene is being expired by the produce and then entertained in the CO₂ gas. Otsuki discloses an ethylene removal device (35) which serves to extract or remove ethylene from the recirculating CO₂ gas in order to suppress aging of the produce. CO₂ gas enters the product storage room (10) through perforated plate (5). The CO₂ gas and ethylene content (generated from the produce) is removed from the product storage room (10) through another perforated plate (6) and directed for recirculation back into the product storage room (10) after passing through the ethylene removal device (35). Since Otsuki discloses a system which is not using any harmful fumigants, he is not concerned with an issue of preventing a release of fumigant to the atmosphere.

Thus, Otsuki clearly teaches away from a fumigation system using toxic fumigants and comprising an absorption device for removing the fumigant from an exhaust of the

fumigation system to prevent release of the toxic fumigant to the atmosphere.
Accordingly, Applicant believes that claim 24 is novel over JP'449.

2. Rejection over Binker et al. (DE19950634)

Binker's method is directed toward fast fumigation of large building spaces, such as mills, by heating the space first and then adding to the heated circulating air fumigation gases such as: sulfur fluoride, carbon dioxide, or organic gases. These gases are usually used to replace more toxic fumigants, such as methyl bromide, when treating spaces which are not air-tight because of hazards associated with the strong toxic fumigants. Bunker neither discloses nor suggests a mobile fumigation system comprising a gas-tight shipping container with a fumigation chamber, but rather a heating system for a fast fumigation process in a large building space. The compartment 4 in Fig. 1 is a combustion chamber, compartment 7 represents the heat exchanger with a heating surface 6 and igniter 5, and a separate heat exchanger chambers 9 and 11 have a heat exchanging surface 17 in order to prevent the overheated combustion gases to be mixed with the fumigant gases. It can be seen that Binker et al. clearly teach away from the subject matter of the present application.

The same arguments are true for the independent Claims 25 and 45 since they both claim a mobile fumigation system comprising a fumigation apparatus for providing a toxic fumigant to a fumigation chamber and a fumigant absorption device to prevent release of the fumigant to the atmosphere.

Rejection under 37 C.F.R. 103(a):

Claims 24-28, 30-37, 40-45 rejected over Otsuki in view of Smithyman (US 6,612,534) and Haraguchi (JP 10-151320).

Otsuki discloses equipment for circulating CO₂ gas through a flow channel (13) so as to feed the CO₂ to the product housing chamber (10). The problem identified in Smithyman is the minimization of flammable levels of phosphine and its self ignition

under certain atmospheric conditions. Thus, there is no motivation to combine these two patents to provide a fumigation system of the present application, where the fumigant is a toxic gas such as methyl bromide, and the object is to prevent the environmental hazard associated with such fumigant. Haraguchi, on the other hand, discloses an absorption device to absorb methyl bromide, however, there is no motivation to combine either of the first two references with Haraguchi.

Since the independent claims as previously presented and presently amended are believed to be allowable and patentable over the cited prior art, the dependent claims are also allowable.

In view of the above, Applicant respectfully requests reconsideration of Examiner's decision and allowance of the application as presently amended.

The Commissioner is hereby authorized to charge any additional fees which may be required in this application under 37 C.F.R. §§1.16-1.17 during its entire pendency, or credit any overpayment, to Deposit Account No. 06-1135. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, other-wise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1135.

Respectfully submitted,

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